

WHAT IS CLAIMED IS:

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1. A circuit comprising:
a diode;
a first transistor coupled in series with the diode;
a first resistor coupled in series with the transistor;
a second transistor having a control node coupled to a
control node of the first transistor and coupled to a node between
the first transistor and the first resistor; and
10 a second resistor coupled in series with the second
transistor such that a current in the second transistor is
independent of a voltage applied across the diode, the first
transistor, and the first resistor.

2. The circuit of claim 1 further comprising a bias
generator circuit coupled to the second transistor and coupled to
the second resistor.

3. The circuit of claim 2 wherein the bias generator
circuit comprises:
a first branch coupled to the second transistor and
coupled to the second resistor; and
a second branch coupled to the first branch by current
mirrors.

4. The circuit of claim 2 wherein the bias generator
circuit includes a third resistor coupled between the second
resistor and a voltage supply node.

5. The circuit of claim 3 wherein the first branch
includes a third resistor coupled between the second resistor and
a voltage supply node.

6. The circuit of claim 1 wherein the first and second

transistors are bipolar transistors.

7. The circuit of claim 1 wherein the first and second transistors are PNP bipolar transistors.

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8. A circuit comprising:
a constant voltage drop device;
a first transistor coupled in series with the constant
10 voltage drop device;
a first resistor coupled in series with the transistor;
a second transistor having a control node coupled to a
control node of the first transistor and coupled to a node between
the first transistor and the first resistor; and
a second resistor coupled in series with the second
transistor such that a current in the second transistor is
independent of a voltage applied across the constant voltage drop
device, the first transistor, and the first resistor.

9. The circuit of claim 8 wherein the constant voltage drop device is a diode.

10. The circuit of claim 8 further comprising a bias generator circuit coupled to the second transistor and coupled to the second resistor.

11. The circuit of claim 10 wherein the bias generator circuit comprises:
a first branch coupled to the second transistor and
30 coupled to the second resistor; and
a second branch coupled to the first branch by current mirrors.

12. The circuit of claim 10 wherein the bias generator

circuit includes a third resistor coupled between the second resistor and a voltage supply node.

13. The circuit of claim 11 wherein the first branch
5 includes a third resistor coupled between the second resistor and
a voltage supply node.

14. The circuit of claim 8 wherein the first and second
transistors are bipolar transistors.

15. The circuit of claim 8 wherein the first and second
transistors are PNP bipolar transistors.